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THE friends of the Kine Pock inoculation have thought it useful, at this time, to reprint some of Dr. WATERHOUSE'S writings on the important subject of Vaccination ; which, commencing in Cambridge in 1800, have been more or less diffused thence throughout the United States ; and to several tribes of Indians ; and to most of the West India islands.

Dr. Heberden, one of the most learned and skilful physicians of the English nation, examined carefully the bills of mortality kept in London, and was thence enabled to compare the destruction made by the small-pox in that vast city, *before* and *since* the practice of *small-pox* inoculation ; and he tells us that he was brought reluctantly to this melancholy conclusion, that the proportional *increase* of deaths from small-pox was as FIVE to FOUR. So that since 1721, (the period of the first inoculation in London and in Boston) although inoculation mitigated the force of the disease in the person inoculated, *it has spread the contagion ; so that more lives have been lost than saved by it.*

The celebrated small-pox inoculator, *Baron Dimsdale*, influenced by truth and patriotism, declared in his latter publications, that the small-pox inoculation has been more *detrimental* than beneficial to society. The deaths by small-pox in New York and Philadelphia prove this beyond all controversy.

In 1723 *twenty thousand* persons perished with small-pox in the city of Paris. In 1768 *sixteen thousand* died with it in the city of Naples.

When Cortes invaded New Spain, a negro slave, who waited on one of his officers, gave some of the natives the small-pox, when one half of the population was destroyed by this distemper. It destroyed upwards of *one hundred thousand* Peruvians in the single province of Quito !

In 1767 a *single soldier* introduced the small-pox, for the first time, into the Northwest Coast of Kamtschatka, when *twenty thousand* perished miserably ; whole villages being nearly desolated. In the expedition of Capts. Lewis and Clark, across this continent to the Pacific Ocean, they mention numerous tribes of Indians, which were reduced to 12, 20, or 30 persons ; all the rest being destroyed by small-pox.

In 1793 the small-pox was conveyed to the Isle of France, by a *single person* from a Dutch ship, when *five thousand and four hundred* perished in six weeks.

During our revolutionary war, when our troops invaded Canada, several thousand of our soldiers perished by this dreadful scourge. Many of them suffered in a manner too shocking to relate. Even so late as the last winter, the troops stationed on the bounda-

ry line between us and the British, suffered with the small-pox, in a manner scarcely credible, were there not persons now among us to testify to the facts.

It is a truth worthy the notice of our statesmen and governors, that all the wars throughout the whole world have never cut the thread of so many lives, as this cruel destroyer of the human race, now happily arrested by the **KINE-POCK**, never more to turn its fury on mankind, to strew the earth with its victims, and blacken it with disconsolate mourners.

 What is denominated **cow pox** in England, is now called throughout every part of the United States, even to the Mississippi, **KINE POCK**.

* THE town of BOSTON had been frequently alarmed by the introduction of the small-pox. It was sometimes brought in by sea ; sometimes a patient was infected with it, no one knew how ; and, being too sick to be removed, the street was boarded up, the *red flag* displayed on the house, the country people terrified, and the markets affected by it. Such was the actual state of things in Boston, in the month of May 1802. An European can hardly form an adequate idea of the effects of such an alarm in Massachusetts. Thus situated, many terrified people, who dwelt near the infected spot, disbelieving the efficacy of the kine-pock, went to the licensed hospital in Brookline, and were there inoculated for the small-pox. The hospital was, at this time, crowded with patients.

It was ten years since a general inoculation pervaded Boston and its neighbourhood ;† and it was conjectured, that there were nearly *fifteen thousand* persons liable to the small-pox in Boston and within a circle of three miles of it. On this occasion, the forcible expressions of Dr. Jenner, in a letter to my friend Dr. Lettsom, incessantly occupied my mind, viz.

“ The small-pox rages at this time in the metropolis. We have the means in our power of stopping the calamity. Why not employ them ?

“ We perceive, as it were, our houses on fire, and with buckets in our hands stand idly gazing on the flames !

“ We bar the doors against foreign plagues by our laws of quarantine ; whilst the greatest domestic plague, that ever infested us, is suffered to advance without controul. Would it

* From page 49 of Dr. Waterhouse's Treatise.

† It is now eighteen years.

*not be wise in the LEGISLATURE to interfere in the cause of suffering humanity ?**

Thus circumstanced, I found it, in a peculiar manner, my duty, seeing I had imported the vaccine disease into America, and had held it up to my countrymen, as an easy *commutation tax*, in lieu of that horrible one, the small-pox, to make a serious effort to diffuse the benefits of it, first through the metropolis, and then through every part of the Commonwealth, so as even to exterminate the very pabulum, or fuel, on which the small-pox feeds. But *how* to effect it, was the question. I must have been grossly ignorant of the world, and of myself, to have supposed, that the old physicians of Boston, where I was not, strictly and legally speaking, an inhabitant, would follow my lead in any general scheme of vaccination; and, without their hearty co-operation, nothing extensively useful could be effected. A vaccine institution would fall far short of the objects aimed at. Besides, it would be beginning at the wrong end, both of society, and of the profession. There was no legally constituted body of men, which appeared to me so likely to carry this desirable object into effect, as the *Board of Health*, which is a kind of *standing committee of humanity*, composed of "one able and discreet person," from each of the twelve wards in Boston. Their power is extensive. They put in force the laws of quarantine. They direct the removal of filth, or supposed sources of contagion or infection, within the town and harbour. They prohibit the sale of unwholesome provisions. They oblige the keepers of boarding houses to make return to them of all sick sea-faring people under their roof, within twelve hours from their seizure. They allow no person to be removed from any ship at the wharves, into the town, without their special permission. But the grand object of their vigilance is to guard against the introduction of the *yellow fever*, and the *small-pox*. Three of this board sit every day. And this arduous task they perform without any pecuniary compensation.

* Lettsom's observations on the cow-pox, p. 31.

I knew that the Board of Health of the last year* was averse from the very idea of patronizing such a plan ; for Dr. James Jackson had addressed a letter to them, asking permission to test with the small-pox some of his vaccine patients, when the board voted to reject his application *in toto*. I was therefore aware, that if my memorial did not carry with it absolute conviction, it would share the fate of the letter of my ingenious and esteemed pupil ; in which event I was prepared to transfer my plan from the town to the *Legislature of the Commonwealth*. In either case, I thought it proper to take a broader ground than that of a private practitioner. I therefore addressed the board of health as follows ;

The Memorial of BENJAMIN WATERHOUSE, M. D. Professor of the Theory and Practice of Physic in the University of Cambridge,

TO THE BOARD OF HEALTH IN BOSTON.

Gentlemen,

NO one can doubt the propriety of my addressing you on the subject of *the new inoculation*, who considers, that you are placed by law, as so many guardians of our lives, health, and safety. The authority, which has made it your duty to put in force the laws and rules, best calculated against the introduction of infection from abroad ; and to obviate the causes of contagion at home, has made it my duty to investigate and teach the principles, on which such laws are founded. Under this idea, it is probable, your board, or the individuals of it, applied for my opinion, and made use of it, when the quarantine law was before the Legislature. From recollection of that circumstance, I am induced, at this time, to address you, not as a private practitioner, but as *the public teacher of the practice of physic in this Commonwealth* ; and am willing to annex to the assertions in this memorial the implied responsibility of my official station ; for it has been, agreeably to an

* They are chosen annually.

early declaration,* under a serious impression of the duty, imposed on me by the medical institution of this University, that I have laboured incessantly, for four years past, in the investigation and diffusion of the most important medical discovery, ever made since the world began ; it being no less than that of exterminating the most loathsome and widely wasting pestilence, that Providence ever permitted to afflict the human race.

Being made acquainted, at a very early period, with this extraordinary discovery, I felt it my duty, as a teacher of medicine, to collect all the facts for the information of those who attended my public lectures. Having imported the disease itself into America, I feel, if possible, a still stronger obligation to acquaint the public with every step I took in diffusing it, even before it passed the limits of my own family. I therefore published all my proceedings from time to time in the newspaper, in a style so simple, as to require no other preparation, than common sense and an unprejudiced mind. But, as they have never yet been collected together in one book, it may be of some use, on this particular occasion, to throw together the leading particulars, and lay them in order before the public, through the respectable medium of *the Boston Board of Health*. For really, gentlemen, (seeing vaccination is marching triumphantly over the globe, and PRESIDENTS, EMPERORS, KINGS, CONSULS, and PARLIAMENTS,† are giving it public countenance and support) it is time for BOSTON, distinguished as "*the head quarters of good principles,*" to consider, whether they will choose to be the last in adopting a practice, which has been followed by France, Italy, Spain, Germany, Prussia, and Constantinople, and even received with warmth in the cold regions of Russia and Norway ?

* See page 18 of a pamphlet, entitled " A prospect of exterminating the small-pox."

† The Parliament of England has given DR. JENNER *thirty thousand pounds sterling* for the discovery.

It has been to me a humiliating reflection, that the very plans I have offered for a *Vaccine Institution* in Boston, for inoculating the poor *gratis*, and which have been received with a chilling apathy, and a repellent suspicion, have, on being transmitted to some of the middle and southern states, been adopted with alacrity. From these places I am continually receiving letters, replete with the most grateful expressions for transmitting them the matter, and directions for carrying on this new inoculation.

I pass from these prefatory remarks to

A CONCISE HISTORY OF THE KINE-POCK INOCULATION.

THERE is a mild distemper, which has been noticed here and there among the herds of kine, in several parts of England, time immemorial. This disorder appears first on the teats and udder of the cows, in the form of irregular pustules, or pocks, of a palish blue colour; and those who milk them, when thus affected, seldom fail of catching the disease.

This distemper has existed so long in Ireland, as to be known there by a *Celtic* name, viz. "*Shinnaugh*," which word is found, on dissection to mean, *a cow's teat*. This carries the knowledge of this epizootic disorder back full 500 years.

There are innumerable instances of persons in Britain and Ireland, who caught the malady by milking cows in their youth, and who have passed through a long life, and have been repeatedly exposed to the contagion of the small-pox without being infected; so that with a knowledge of this disease, has ever been connected an opinion, that a person once affected with it, is ever after secure from the small-pox.*

EDWARD JENNER of Berkley, a town in the vale of Gloucestershire in England, a learned, skilful, and accomplished physician, was the first who took this knowledge, so long floating on the breath of the vulgar, and impressed upon it the stable

* The absurd doctrine, that the small-pox would secure a person only a short time, was urged *eighty* years ago to prevent Dr. Boylston from advancing with his inoculation in Boston.

form of science. He it was, that with a Franklinian sagacity first transferred it from that mild, healthy, and invaluable animal, the cow, to the human species; and by a series of experiments, demonstrated, that it is *a perfect security against that loathsome disease, which has destroyed more than FORTY MILLIONS of people every century!* whereby he has been the means of preserving more lives than ever fell to the lot of any other human being. This extraordinary fact came forth from his hands in so finished a form, that were all the other writings on the cow or kine-pock, but Jenner's, destroyed, posterity might have a clear and perfect idea of this benign remedy, and its salutiferous consequences. For Dr. Jenner has demonstrated,

“ I. That the cows are liable to a pustular disease, which was popularly called in England the *cow-pox*.

II. That the human species might be inoculated with the *limpid* fluid produced in the pustules of this cow-pox.

III. That, in consequence of such inoculation, an action commences, which makes such a change in the constitution, of the inoculated persons, as to render it impossible for them to be ever infected with the small-pox.

IV. That the disease, induced by inoculation with the cow-pox, is of a slight kind, wholly free from danger, seldom attended with fever, and never with suppurating eruptions, like those of the small-pox.

V. That if, by any accident, too much general disturbance is excited in the constitution by inoculating for the cow-pox, it is easy, by a proper application to the inoculated part, to regulate, or suppress such disturbance.

VI. That one child in a family might be inoculated for the cow-pox, without the hazard of infecting any other person in the family; the cow-pox not being a contagious disease. And none of the facts or observations, published by Dr. Jenner, have been disproved, or refuted.”*

* Dr. Denman.

This vicarious disease retains in England its vulgar name of *cow-pox*. It is called *la vaccine* in France; *vajuolo vaccino* in Italy; *vaccina* in Spain, Germany, and the Northern Nations; and in the United States of America, the **KINE-POCK**.*

That I produced the *same* disease in America, is confirmed by virus taken from my patients here, and sent to England, producing the *same* disease there. We have, besides, demonstrated the *identity* of the distemper to the *eye*, by means of pictures of the kine-pock in all its stages, printed in England under the direction of Jenner himself, which exquisite representations ascertain the *identity* of the local disease beyond the faintest shade of ambiguity. In like manner, the depicted *spurious* pustule is an exact description of the impostor that pestered us in the autumn of 1800.

That this cow or kine-pock will secure the human constitution from the contagion of the small-pox as certainly, as rods of iron will secure a building from the effects of lightning, no one, *who has paid due attention to the subject*, now doubts in America. But as *lightning rods* may be so *injudiciously* placed, as not to protect the building from injury, so the kine-pock inoculation may be so *unskillfully* conducted, as not to secure the person from the contagion of the small-pox.

When a building, guarded by rods of iron, is struck with lightning, we conclude they were not adjusted according to the rules laid down by *Franklin*; they being founded on a *law of nature* relative to the electric fluid and a metallic rod. And when we hear of a person having the small-pox, after being supposed to have had the kine-pock, we are as certain that the inoculation was not conducted according to the rules laid down by *Jenner*; they being, in like manner, founded on a *law of nature* respecting the vaccine virus and the human subject. Whenever, therefore, we meet with adverse accidents in ap-

* Instead of the plural pox, because it has but *one* pustule. In some parts of America *cow-pock* is synonymous with *spurious-pock*; while by *kine-pock* they mean the *genuine* infection. Hence the importance of adhering to the term **KINE-POCK**.

plying the *Franklinian*, or the *Jennerian* discovery to practice, we must look for the cause in *erring man*, and not in UNERRING NATURE. It is the business, then, of the philosopher and the physician, to inquire into the causes of these aberrations.

Assuming it then, as a fact (and the learned of all nations have admitted it), that Dr. Jenner has demonstrated *a new law of nature*, respecting the prophylactic, or preventive power of the kine-pock in the human system ; we presume that every one, who dreads the small-pox, would gladly shelter himself behind the *Ægis* of Jenner, from its too fatal effects, *had he but a cloudless view of the whole business* ; and the ultimate object of this address, gentlemen, is a PLAN to help your fellow citizens to such a view of it ; and thus to relieve them from their present state of doubt and uncertainty, respecting a matter of more importance to your commercial town, than any that ever exercised its deliberations, since our venerable forefathers first landed on your renowned peninsula.

In the present unsettled state of this practice, the inhabitants of BOSTON know not what to adopt, or what to reject. Although I hold up to you, with *confidence*, a sure, safe, and effectual method of forever securing your offspring from the worst of maladies, yet I wish not that you should patronize, much less adopt it, without A PUBLIC EXPERIMENT PERFORMED UNDER YOUR OWN INSPECTION.

The only question now remaining on the minds of those who are well wishers to the new inoculation is, *why has this operation ever failed ? Why have not the true prophylactic effects followed every application of the vaccine virus to the abraded skin ?* The full discussion of these questions is reserved for another place. Suffice it to say for the present, that I very early warned the public against *spurious* cases, or an appearance on the arm not possessing the characteristic marks of the genuine pustule, and cautioned my readers against certain occurrences, which, if not critically attended to, would

bring the inoculation of this recently imported distemper into a *temporary* disrepute. But my warnings were misconceived, and misrepresented ; so that at length, I ceased from any further expressions of caution, and endeavoured to content myself with predicting the consequences, that would ensue from aiming to walk strait, in an unfrequented path, blind-fold.

A public experiment by some learned body, or association of physicians, or some regularly constituted body, as the board of health, is requisite to infuse confidence into the minds of the people. For an individual, however warmly disposed to promote the good of his fellow creatures, can do but little in such a peculiar business. This induced me to address the *Boston Board of Health*—to request them to take this new mode of preventing the small-pox infection into their serious consideration, as a matter of great importance to the community, and coming with peculiar propriety under their cognizance.

The writer of this has, for more than three years, devoted his undivided attention to maturing, and bringing forward this mode of exterminating an horrid disease. He has, by suggesting, but not obtruding on the public, held up to their view A MILD AND EASY SUBSTITUTE. In the same spirit he would now propose to *the Board of Health*, as a principal mean of effecting this end, that they would take some step towards forming a *committee*, to inquire, 1st, *Whether there be sufficient evidence of the efficacy of the kine-pock to justify the expense of a public experiment ;* and ample documents are here transmitted to assist in you this inquiry. If this is found to be the case, to establish, 2dly, a COMMITTEE OF PHYSICIANS to conduct the experiment. To ensure universal satisfaction, it is suggested, that the committee should consist of *six of the oldest physicians* of Boston ; men, who from their age and character, are rather retiring from extensive business, than candidates for it ; and that to these should be invited the physi-

cian of the small-pox hospital at Brookline. I would further ask leave to propose, that to these medical characters should be associated as many *clergymen*, whose information, habits of inquiry, and benevolent views, would complete a committee, every way adequate to the important task, of forming, and laying, in conjunction with the board of health, before the public, a correct and unbiassed report of facts.

On this occasion, may I not be allowed to make a remark or two for the consideration of those, who from their daily occupations, cannot be supposed to have been in the habit of closely contemplating the works and operations of nature? * Such are apt to imbibe erroneous opinions concerning what they denominate the *mean* and the *noble*, the *great* and the *small*, the *trivial* and the *magnificent*, which he, who is in the habit of closely contemplating the GREAT FRAME OF NATURE, the mutual connexion, combination, affinity, and harmony of parts, as well as the never ceasing circulation of causes and effects, cannot admit. Such do not consider, that, however essential the distinction of bodies into *great* and *small* may be to *us*, they are not so in the view of the SOVEREIGN ARCHITECT, with whom an *atom* is a world, and a world an *atom*! Who then can stigmatize any work, or operation of nature, by the epithets of *mean* and *trivial*? I have been led to these remarks on hearing some declare, that they never could have faith in an operation, or process, that had so *mean* and *trivial* an origin as this, now offered to the public, as their greatest benefit, and as the most valuable discovery ever made in medicine. The fact is, gentlemen, the *greatest* benefits now enjoyed by man, both in *art* and *nature*, sprung from what is called *mean* and *trivial* origins. A few instances may illustrate my meaning.

* Local opinions and prejudices rendered these illustrations necessary. A considerable proportion of the board of health were unbelievers in the efficacy of the kine-pock at the time this memorial was presented.

Two or three people, cast away in ancient times, on the coast of the Mediterranean, made a fire to cook their victuals and repair their boat. In this operation, they happened to burn the plant *Kali*, which mixing with some sand, or coarse gravel, and all melting together, first produced *glass*; by means of which we can not only bring distant objects as if within our touch, but open an intercourse with the Heavens. Nay further, by the help of two or three pieces of glass fixed in a triangle of wood, the seaman can tell to a mile where he is, south or north of the equator. But shall we despise the *telescope* and the *quadrant* because they had so mean an origin?

Some other persons playing with a little *red stone*, found that it attracted iron; and at length that a needle touched with it, would always point towards the north-pole. Some lucky mortal, like Jenner, took the hint, and with it formed the *mariners' compass*, by means of which the sailor traverses the trackless ocean, in the darkest night, with perfect safety.

If we turn from these instances in *art* to those of *nature*, and consider the causes of the wealth and power of nations, do we not see similar instances, full as striking? Is not a *peppercorn* the foundation of the power, glory, and riches of India? as is the *acorn* of that renowned nation, whence we of New England sprang.* “A truth, constantly found,” says Bruce, “in the disposition of all things in the universe, is, that God makes us of the *smallest* means and causes, to operate the *greatest* and most powerful effects.”

Let us then no longer be told of the *contemptible origin* of that benign remedy, which PROVIDENCE has destined for the preservation of our offspring from a loathsome and destruc-

* The board of health was then composed principally of commercial men and sea captains retired from business. Hence the reason for selecting instances in the commercial and nautical line. The President at this time is *Benjamin Russell*, Esq. editor of the *Centinel*, in whose paper Dr. Waterhouse's first publication on the kine-pock appeared. The cause of vaccination owes much to Mr. Russell, whose zeal in its promotion has never slackened.

tive plague. The earth maintains not a more clean, placid, healthy, and useful animal than the Cow. She is peculiarly the poor man's riches and support. From her is drawn, night and morning, the food for his ruddy children ; while the more concentrated part of her healthy juices is sold to the rich, in the form of cream, butter, and cheese. It would indeed be uncomfortable to live without this animal, as she supplies man with more conveniences, and at a less expense, than any other quadruped in the creation. When we have exhausted her by age, her flesh serves for our nourishment, while every part of her has its particular uses in commerce and medicine. On these accounts she is an useful, though invisible wheel in the great machine of state.* Hence we cease to wonder that this useful domestic animal was consecrated among ancient nations, as an object of worship.

You will readily see, gentlemen, that this memorial, though meant to carry every mark of respect, is not made in the style of cringing solicitation, like a man exclusively interested in the event, and actuated by personal motives merely ; but of a man conscious of his duty, and zealous in promoting a public benefit every way worthy your patronage ; a benefit of more real value to the town of BOSTON, *than all the riches contained within its limits*. You will also remember, that the main object of this address is not to persuade you blindly to patronize the new inoculation, but *to induce you to cause a rigid inquiry to be made into the truth of my assertions, and to have them subjected to the test of A PUBLIC EXPERIMENT by a set of men, whose knowledge, age, and virtues, will create confidence, and inspire satisfaction.*†

BENJAMIN WATERHOUSE.

Cambridge, May 31, 1802.

* The word *wealth* was derived from this species of animals, viz. *pecunia* from *pecus*. Hence it was that the first money ever coined in the world, had a cow stamped upon it, as a portable representative of riches.

† That is, a committee of six of the oldest physicians, and six of the oldest clergymen in Boston, together with Dr. Aspinwall.

The Board of Health paid a prompt attention to this address, adopted and pursued the plan here suggested in every particular, excepting that which related to the physician of the small-pox hospital in Brookline ; and that which regarded the gentlemen of the clergy. I grieved in silence that they mutilated any part of my plan, yet would not utter a word, lest it should impede their meritorious exertions. Partial to my original idea, I must nevertheless be allowed to remark, that if to the six oldest physicians of Boston, had been added the six oldest divines, they would have formed a weighty and dignified jury, whose verdict would every where, and forever have silenced the insinuations of the ignorant and mischievous, respecting interested and professional motives. In 1721 six clergymen of Boston did more in strengthening the hands of Dr. Boylston, than any six hundred people that could have been selected in the province. For these reasons I have never ceased to regret that that part of my design was not likewise adopted.

Had the Board of Health hesitated in pursuing the plan in general, chalked out in my memorial, I had determined to petition the LEGISLATURE for a law to prohibit what is called a *general inoculation* for the small-pox, and to confine the inoculation for it to two or three hospitals. I should have grounded my petition on this solemn truth, that under the most favourable circumstances of the inoculation, some die immediately,* or by some slowly wasting disease ; or if they escape with life, are liable to a loss or injury of some of the senses ; whereas a kind Providence has now offered us a mild and easy substitute, that *has never proved fatal in a single instance.*

To have expected such a law at present, from the representatives of this land of liberty, savoured more perhaps of the sanguine expectations of a projector, than the cool reasonings

* More than 200 died in Boston during the last inoculation with the small-pox. One in *sixty* died from small-pox inoculation in New Bedford 18 years ago.

of a politician ; but the great object of my wishes would nevertheless have been obtained by such a petition, which was, *an examination of the prophylactic power of the kine-pock, by a COMMITTEE OF THE ELDER PHYSICIANS, DIVINES, AND GENTLEMEN OF THE LAW.*

The Board of Health however pursued the main object with unremitting attention and success. On the 16th of August 1802, *nineteen children* were inoculated for the kine-pock at the Health Office in Boston ; and went through the disease to the entire satisfaction of the physicians and of the board.

On the 9th of November following, these *nineteen children*, with another who had the kine-pock two years before, were sent to Noddle's Island, which is about a mile from the long wharf of Boston, and there inoculated with variolous matter. Two children were at the same time inoculated with the small-pox, with a view to compare the progress of the local affection in each, and also to afford a stock of fresh matter for a re-inoculation ; and to obtain moreover a perfect variolated atmosphere, so that the affection might be applied to the lungs, as well as to the wound in the skin. The following is

THE REPORT OF THE MEDICAL COMMITTEE.

WITH a view to ascertain the efficacy of the *kine* or *cow*-pox, in preventing the small-pox, and of diffusing through this country the knowledge of such facts as might be established by a course of experiments instituted for the purpose, and thereby removing any prejudices, which might possess the public mind on the subject, the Board of Health of the town of Boston, in the course of the last summer, came to a determination to invite a number of physicians to cooperate with them on this important design ; and with a liberality becoming enlightened citizens, erected a hospital on Noddle's Island for carrying it into execution. Accordingly, on the 16th of August last, nineteen boys, whose names are subjoined, were inoculated for the cow-pox at the office, and in the presence

of the abovementioned Board, with fresh, transparent cow-pox matter, taken from the arms of a number of patients then under this disease. These all received and passed through the disease to the complete satisfaction of every person present, conversant with the disease.

On the 9th of November, twelve of the above children, together with one other, George Bartlett by name, who had passed through the cow-pox two years before, were inoculated for the small-pox at the hospital on Noddle's Island, with matter taken from a small-pox patient in the most infectious stage of that disease. The arms of these lads became inflamed at the incision, in proportion to the various irritability of their habits, but not to a degree greater than what any foreign, virulent matter would have produced. The small-pox matter excited no general indisposition whatever, through the whole progress of the experiments, though the children took no medicines, but were indulged in their usual modes of living and exercise ; and were all lodged promiscuously in one room.

At the same time and place, in order to prove the activity of the small-pox matter, which had been used, two lads, who had never had the small-pox or cow-pox, were inoculated from the same matter. At the usual time the arms of these two patients exhibited the true appearance of the small-pox. A severe eruptive fever ensued, and produced a plenteous crop of small-pox pustules, amounting by estimation to more than five hundred in one, and two hundred in the other.

When these pustules were at the highest state of infection, the thirteen children before mentioned were inoculated a second time, with recent matter, taken from said pustules, which said matter was likewise inserted into the arms of the seven other children, who were absent at the first inoculation. They were all exposed, most of them for twenty days, to infection, by being in the same room with the two boys, who had the small-pox, so that if susceptible of this disease, they must in-

evitably have received it, if not by inoculation, the natural way.

Each of the children was examined by the subscribers, who were individually convinced from the inspection of their arms, their perfect state of health, and exemption from every kind of eruption on their bodies, that the cow-pox prevented their taking the small-pox, and they do therefore consider the result of the experiment as satisfactory evidence, that the *kine or cow-pox is a complete security against the small-pox.*

JAMES LLOYD M. D.

SAMUEL DANFORTH M. D.

ISAAC RAND M. D.

JOHN JEFFRIES M. D.

JOHN WARREN M. D.

B. WATERHOUSE M. D.

} Comm.

This decisive experiment, which has fixed forever the practice of the new inoculation in Massachusetts, was instituted three years and eight months after my first publication of the existence of such an epizootic distemper, as the cow-pox; and about two years and four months after I made the first experiment with it in America, on my own children.*

A STILL MORE STRIKING AND CURIOUS INSTANCE OF THE EFFICACY OF THE KINE-POCK.

WHEN the new inoculation was first attempted in the state of Vermont, numerous cases of the *spurious* pustule appeared. The practitioners, not being able to discriminate the *true* from the *spurious* disease, advised many of their patients

* The first person inoculated for the KINE-POCK in the western hemisphere was

DANIEL OLIVER WATERHOUSE, at the age of 5 years, July 8, 1800.

The second *Benjamin Waterhouse*, at 3 years.

The third *Mary Waterhouse*, at 1 year.

The fourth *Elizabeth Watson Waterhouse*, at 7 years; and then three of my domestics—all in Cambridge. Six of these were soon after inoculated by Dr. Aspinwall, at his hospital in Brookline, with the matter of the small-pox, without any signs of infection. Seven years after this they were again tested with small-pox; which was done to convince the faithless, and silence the mischievous.

to submit to the test of the small-pox, when most of them took that disorder. This brought vaccination into disrepute, so that the authority of the town of Randolph allowed the inhabitants to inoculate for small-pox, in March 1808. While Dr. Bailey and Dr. Copp undertook to inoculate all who disbelieved the efficacy of the kine-pock, in Randolph, Dr. E. Bissell* and S. Fancher vaccinated, at the same time and place, such as retained a confidence in the preventive power of the kine-pock. This difference of opinion and practice among the physicians had an unpleasant effect on the society of the place. It disturbed the harmony of the town; created divisions; and engendered ill humour in families, where husband and wife, father and son, brothers and sisters were, sometimes, opposed in opinion to each other. To put an end to this division of sentiment, the Fathers of the town wisely determined to bring the matter to the test of the most rigid experiment; and to establish the facts one way or the other. A town meeting was therefore called; and a respectable committee appointed to superintend the experiment of testing with small-pox SEVENTY FIVE persons, *men, women,* and *children*, who had received the kine-pock from Dr. Bissell, and Fancher.

The committee repaired, on the day appointed, to the pest-house, where were a number of patients heavily burdened with small-pox. The two small-pox Doctors, and the two kine-pock Doctors attended the experiment, each side inspired with very different hopes and wishes. Then the *seventy five men, women,* and *children* were inoculated with the small-pox matter, taken warm from the pustules of people covered with them. Six days after the inoculation, the committee and the physicians repaired again to the pest-house, when all acknowledged, by the appearance of the pustule, that the small-pox matter had proved itself to be good. In six days more they met again; and on a careful examination of the arms of each, and every one of the men, women, and children,

* From matter supplied by Dr. Waterhouse.

pronounced them all uncontaminated ; and they were accordingly discharged, as persons on whom the small-pox could have no effect. These seventy five persons not only received the virus by the wound in the skin, but breathed the infected atmosphere of the small-pox hospital. In this respect the experiment was more perfect than any heretofore made in America ; not even excepting that highly satisfactory one on Noddle's Island. In a word, it wanted nothing to place it at the head of all our trials, but the following curious experiment, that occurred at the same time and place.

The committee, in order to give every proof, which the noble discovery of the kine-pock allowed, were desirous to find out some woman with a sucking child, who would be willing to let her infant have the kine-pock, while she herself had the small-pox. Mrs. ——— heroically offered herself and child for the experiment. The infant was first inoculated with kine-pock ; and 48 hours after, its mother was inoculated with small-pox. The kine-pock went on regularly in the child, and so did the small-pox in the mother, who suckled the child all the time. The mother had a considerable number of pustules on her body, face, and breasts ; one or two of which were kept raw by the tender lips of the infant, while sucking ; and yet the child appeared as well throughout the whole process, as if it had been nursed by a person not suffering under small-pox. The contrast between the inoculated diseases was truly striking ! The infant with *one* beautiful pustule, and playful, the mother with *hundreds* ; and yet the infant rendered, by this simple operation, as secure from a future attack of the loathsome, contagious, and dreadful small-pox, as the mother with all her sufferings. Putting mothers out of the question, *can the FATHERS of our country read this anecdote without emotion ?* Can they be insensible to “ a blessing (to use the words of our brethren of Milton) great as “ it is singular in its kind ; whereby the hearts of men should “ be elevated in praise to the ALMIGHTY GIVER ? ” But what cast a deep solemnity over the whole business was the

death of two married women in the pest-house, from small-pox *inoculation*. From thence the contagion spread to other towns. It is to be hoped that this is the LAST inoculation, that ever will be sanctioned by authority in New England.

THE town of *Milton*, situated ten miles from Boston vaccinated 337 of its inhabitants ; a very particular account of which has been already published.*

About the same time† the blessing of vaccination was offered to the inhabitants of NEW BEDFORD ; where more than *fifteen hundred* persons, of all ages, from five days old to upwards of seventy years, passed through the kine-pock, without a single disagreeable accident. Some distinguished characters among the society of *Friends* took the lead in this benevolent business. When the people saw that the new inoculation was advocated and upheld by an order of men, remarkable for not being “*carried about with every wind of doctrine,*” they received it without hesitation. The names of *Rotch, Rodman, and Hazard*, will ever be held in grateful remembrance by the inhabitants of *New Bedford* and *Fair Haven*, for the generous part they took in this business.

The patrons of vaccination at Milton put divers questions to *Dr. Waterhouse* respecting the proper time, the season, the circumstances, and the reputed consequences of this inoculation ; which arose principally from doubts started by unbelievers. To remove these impediments to their plan, *Dr. Waterhouse* wrote the following

* Twelve persons from among these 337 were tested, with every circumstance of care and caution, with small-pox. It is needless to say that each and every one of them resisted infection ; and increased the public confidence in the prophylactic power of the kine-pock.

† August and September, 1809.

“ *Letter to the Committee of town of Milton, appointed to consider the subject of the vaccination.*

“ *Gentlemen,*

“ RESPECTING the questions put to me relative to the practice and efficacy of vaccination, I answer, that I never have had the least reason to doubt, but that the kine-pock effectually and forever secures a person from the small-pox.

“ The only reason why I tested my own children with small-pox, was not to satisfy myself, but the public. I did it in regard to my own children, to shew my entire confidence in the practice. To satisfy others, I inoculated them with small-pox twice after the period of seven years had elapsed. This was done to convince the faithless, and to confound the mischievous.

“ The matter may become vitiated, producing a spurious pustule, through ignorance and inexperience of the inoculator; but I have never known any other disease communicated by the kine-pock inoculation.

“ The inoculation is safe and efficacious at any season, any age, and under any circumstances, in either sex. Labouring men, and mechanics, need not abstain from their usual employment. Children may go to school during the whole process.

“ Every good man will forward this benevolent plan, especially as there is now some danger of the small-pox extending itself in a neighbouring town. The proper time for resisting an enemy is when he approaches our borders, and has attacked our citizens.

“ I here subjoin a comparative view of the *natural* small-pox, the *inoculated* small-pox, and the *kine-pock*. It contains serious facts, which it is the duty of every parent to consider, and act according to his or her feelings.

SMALL-POX AND KINE-POCK, CONTRASTED.

A comparative view of the natural small-pox, inoculated small-pox, and kine-pock.

<i>Natural small-pox.</i>	<i>Inoculated small-pox.</i>	<i>Kine-pock.</i>
A contagious disease. One in six who takes it, dies. It is like an attempt to cross a dangerous stream by swimming where one in six perishes !	Contagious. One in 200 dies. It is like crossing the stream in an old leaky boat, where one in 200 perishes !	Not contagious. Never fatal. It is like crossing the stream on a new and safe bridge.

“ For further particulars I refer you to some directions, I had printed the 3d instant, which conclude with these

“ OBSERVATIONS.

“ 1. It occasions no other disease. On the contrary, it has often been known to improve health ; and to remedy those diseases, under which the patient before laboured.

“ 2. It leaves behind no blemish, but a *blessing* ; one of the greatest ever bestowed on man ; a *perfect security against the future infection of the small-pox.*

“ BENJAMIN WATERHOUSE.

“ *Cambridge, July 9, 1809.*

HISTORY OF THE SMALL-POX.

THIS disease was totally unknown to those of ancient times. If we recur to the oldest book in the world, the bible, we shall find no account of small-pox; not even among the plagues of Job. There are no traces of it among the Egyptians, nor in the Assyrian Empire. There is no account of the disease in any of the Grecian writers, nor is there a trace of it in any of the Roman writers, whether antiquarians, poets, or historians. Had this cruel distemper an existence during the greatness, grandeur, and glory of the Roman Empire, it would have made its dreadful appearance in their vast armies, that were, like Bonaparte's in our day, extending their conquests, not merely over Europe, but Asia. Had the small-pox existed at the decline of the Roman Empire, it would have discovered itself in the vast host of Goths and Vandals, who overran the most polished part of the Roman Empire. Nay, had it existed at all in any part of the world where letters were known, learning would have brought some account of it down to us.

While the Goths and Vandals marched their innumerable hosts from the North of Europe, through Germany into Italy, and overran the Western Roman Empire, the Mahomedans were carrying their conquests with the rapidity of a torrent over most parts of Asia, and some parts of Africa. They overran Persia, Arabia, Palestine, and Egypt; and then it was, and not till then, that the *small-pox first appeared in the world*; which is about 1300 years ago. About the same period, and in the same region, the *measles* appeared for the *first time*.

Some have supposed that when these Mahomedan armies penetrated far into Africa, they brought thence this cruel scourge into Europe. But I am inclined to believe that this wide wasting pestilence took its origin from the brute creation; and that it came from the camels, the dromedaries, the horses, or the kine, by which scripture term we mean the cow

kind. It is worthy of remark, that of the six animals which we have domesticated, five of them are liable to an eruptive distemper analogous to small-pox. These animals are the *horse*, the *cow*, the *hog*, the *dog*, and those birds, which in our language have no name, I mean the *barn-door fowl*, therefore called cocks and hens, the name of the male and female of all birds. The grease in the horse, the vaccina in the cow, the swine-pox, the *distemper* in the dogs, and the chicken-pox may have been originally the same disease, but changed in its malignity by passing through animals of a different species. The chicken-pox is very common among the barn-door fowl in the East Indies, and they call it, and the small-pox by the same name. But none of these disorders came so near the small-pox, as that found in the cow ; yet it differs from it in this blessed peculiarity, that it is not only infinitely milder, but *noncontagious* ; and yet so like the small-pox as to be a substitute for it.

Be the origin of small-pox whatever it may, the distress occasioned by this new plague was beyond expression dreadful. It astonished and checked the victorious army, and conquered the conqueror. Its attack was sudden ; its symptoms horrible, and its fatal termination shocking to the beholder. The most learned physicians, at that time in the world, were the Arabian. They were however totally at a loss how to account for it, or how to treat it. They could find no description of it in any Grecian, Roman, or Asiatic writer. They therefore sat down, folded their arms in stupid despair, on seeing the desolating effects of this cruel distemper. It is conjectured, that several hundred millions of people have perished miserably with the small-pox, since its first appearance in the Mahomedan army ; and it is computed that forty millions have died of it during the last century.

I can think of no disease, in which the superintending care of a Divine Providence is so conspicuous as in this. Were we liable to take the small-pox more than once, like a fever or inflammation, what a horrid situation mankind would be in !

And were the brute creation liable to this distemper, what could prevent them, and the whole human race from being totally destroyed, or miserably mutilated? But mankind can take the disorder but once, and none of the brute creation can ever take it at all.

To the kind Parent of all that lives, who in the midst of judgment remembered mercy, is to be attributed the praise for restraining this dreadful scourge, and saying to the pestilence that walketh in darkness, "*Thus far shalt thou go, and no further.*"

The small-pox is the same now as it ever was. It is equally severe, and equally loathsome. Ask those who have lived through the natural small-pox, and can relate their sufferings. What destruction has been committed on the sight? on the hearing? and on beauty?

Few, if any, now living among us, know what the small-pox really is. Let such as have only *heard* of it, and never felt or seen it, draw near to the bed-side of a patient, and notice with me the first appearances and the growing symptoms. They need not be afraid to come near the miserable object, after they have passed *properly* through the *kine-pock*. We judge of the approaching disorder of the patient in bed, by the following symptoms :*

1. By the frequent sighing and sobbing, and his weight of anxiety that he is unable to express.
2. By pains in the region of the stomach, with an inclination, but generally an inability to vomit.
3. By the racking and frequent shooting pains along the back and loins.
4. By the general weariness and aching of every limb.
5. By the most unpleasant sensation of cold, and a kind of horror, not relieved by any external warmth.
6. A continual drowsiness, and disinclination for food.
7. Then succeeds heat, thirst, inflamed eyes, restlessness,

* See Dr. Thornton.

or a constant inquietude. The pulse is quick and hard. Convulsions now come on in children ; and violent sweating in old persons. Such are the symptoms which usually usher in this dreadful foe to the human race, which now manifests itself,

8. By many red spots, resembling flea-bites, first on the face and upper parts of the body, and afterwards invade the whole trunk. They look angry, create pain, and gradually elevate themselves above the skin, taking on the appearance of pimples.

9. By the fifth or sixth day they are converted into pustules, containing a transparent fluid, and each has an accompanying inflammation around it.

At this period of the disease the throat becomes inflamed, and is painful. The breath is hot and fetid ; the swallowing is difficult ; the voice hoarse. In grown people there comes on a salivation ; and in infants a diarrhæa.

On the seventh day the eye-lids swell and are glued together, and the patient has both the sensation and apprehension of the loss of sight.

On the eighth day the watery fluid of the pustules is changed into thick matter ; and the effluvia now issuing from the patient is highly noisome and infectious. And instead of yellow pus or matter, only ichor is produced, which erodes deep, and ends in mortification of the parts. Often purple spots appear in the spaces surrounding the eruption, which forebodes the worst of symptoms. Often profuse bleedings pass off by the several outlets of the body.

At this melancholy period of the disorder "*the human face divine*" is bereft of every feature, (for eyes, nose, or mouth can scarcely be distinguished). Then it exhibits the most distressing sight, being one mass of corruption ; and, at this time, should sleep kindly come in to appease his miseries, it is disturbed and short ; and he frequently wakes with a start, as if roused by some dreadful apprehension ; but more commonly the sleepless nights are passed in tearing off this mask

of humours ; which from a dark brown, changes to a black ; and each morning presents a horrid scene of gore mingled with corruption !

To behold the poor, tortured victim, muffled up, struggling and resisting, and finally overcoming every artifice to prevent him from tearing his flesh to pieces, is the most melancholy sight, which any one, especially a parent, can behold !

Bystanders no longer recognise the features, or the temper of an heretofore lovely child. At such a moment, parents would willingly give up every external grace, or beauty of countenance, for the preservation of its life. Even the loss of sight and of hearing, distressful as the loss of them is, would be willingly given up for its life. Distressing as this appears, it all occurs once in 200 or 300 cases in the inoculated small-pox. A parent, who disbelieved the efficacy of the kine-pock, had his only child inoculated with small-pox. What was the consequence ? The stoutest heart even of a stranger could not but shrink with horror, and drop a tear of pity over its sufferings ! Paint to yourself a little, innocent sufferer, stretched out and covered with one continued sore ; threatened with suffocation, uttering the agonies he feels by piercing, heart-wounding groans. Observe how his mouth foams ; listen to the grinding of his teeth ; see how he thrusts his little trembling tongue betwixt them, and how piteously it is wounded ! Look ! how he is agitated with the most dreadful convulsions ! His feeble limbs are twisted and contorted, and threaten dissolution ! His body bends backward—is lifted up, and thrown down again ! These fits now increase—then cease ; alas ! only to return with redoubled violence. Misery calls aloud for help ; but calls in vain, New convulsions succeed. He foams and struggles—gasps—gasps again—and expires !*

Any heart would bleed at a sight like this ! But what must be the feeling of the parent, to see the fairest blossom of his hope blasted by small-pox inoculation, because he had not

* See Dr. Donald's observations.

faith in the kine-pock, which would have saved his child from all these agonies of distress? To lose a child by any means is a sad calamity. But to lose one by this most cruel and loathsome distemper, brought on by a parent's own obstinacy, because he was wiser than all the rest of the world, and because he preferred risking his only child with the small-pox, with which some die, to giving it the kine-pock, of which none ever died! We will not attempt to describe the feelings of a father, and the distraction of a mother, in this case. We must try to check our imagination!

In these extreme cases of small-pox, the physician watches with anxiety every change. At length he observes the swelling of the face to abate; and the limbs in their turn, become tumefied; and fever and severe symptoms appear a little to remit. But it recurs again with increased violence; and the miserable patient undergoes a second conflict (the secondary fever) more dreadful than the first, because the weakened powers of life are less able to resist the violence of the distemper. Most commonly the patient dies between the 14th and 17th day from the first attack.

But should the powers of nature rise superior to the disorder, and he should struggle on past the 20th day, and we should be thence able to predict his recovery, how miserable the object! how torn his flesh and scarred! How his limbs totter! and how his bones almost push through his skin! how emaciated his countenance! sunk the eyes, and livid the flesh! But above all, how fretful the temper! and how is the mind weakened!

Even under this apparent recovery, death has still accomplished his work; and the patient, too soon congratulated on his recovery, sinks under a lingering consumption, or loses the use of his limbs; or else is eaten away with those slow, corroding ulcers, called *scrophula*.*

Such is the true, and unexaggerated picture of this loath-

* See Dr. Thornton's inoculation of the village of Lowther.

some distemper, that baffles in description all the powers of language.

It pleased the AWFUL, ALL-RULING MIND, "*in whom we live, move, and have our being,*" to communicate to distressed humanity, a safe and easy remedy against this loathsome pestilence. The highly favored individual was EDWARD JENNER, of *Berkley*, a small town in the vale of *Glocester* in *England*. He it was, that with a FRANKLINIAN sagacity first transferred the vaccine infection from that mild, healthy, and invaluable domestic animal the *cow* to the human person.

This happy discovery was announced to the world by Dr. JENNER in June 1798. Five months after, it was communicated to Dr. WATERHOUSE by Dr. LETTSON. At this period not more than three or four persons had been inoculated with the cow-pox in London.

And this town of *New-Bedford* is now reaping the benefit of the labours of these men. The Parliament of England, with a noble generosity, characteristic of the nation, have given Dr. JENNER *thirty thousand pounds sterling*. They wisely considered, that if they gave rank and fortune to the General, whose business it was to destroy lives, they ought in justice to suffering humanity to place the Physician, who had been the means of saving the lives of so many of their subjects, in a state of ease and affluence.*

OF THE SPURIOUS AND OF THE TRUE KINE-POCK.

DR. JENNER informs us, that during his early investigation of the kine-pock he found that some of those, *who seemed to have undergone the disease*, nevertheless on inoculation with the small-pox felt its influence just the same, as if no disease had been communicated to them by the cow. As he proceeded, he learnt that the cow was subject to eruptions on

* Extracted from the *New Bedford Mercury*, Oct. 6, 1809.

her teats, that were capable of communicating sores to the hands of the milkers; and that whatever sore was derived from the animal, was called in the dairy the cow-pox. Thus was he led to form a distinction between these diseases, one of which only he denominated the *true*, the other the *spurious*.* A discouraging impediment however arose, which checked for a while the advancement of our philosopher. When the *true* cow-pox broke out in a dairy, he discovered instances of persons, who had milked infected cows, and had thereby apparently gone through the disease in common with others, who were nevertheless still liable to receive the small-pox. The mind of Jenner could not rest satisfied with the idea of want of uniformity in the operations of nature. He conceived it improbable that the human constitution, having undergone the cow-pox, should in some instances be perfectly shielded from the small-pox, and in many others remain unprotected. He therefore started afresh in the pursuit of truth, with redoubled ardour. The result was fortunate; for he now discovered that the virus of the cow-pox was liable to undergo progressive changes from the same cause precisely with the small-pox; and that, when it was applied to the human skin in its degenerate state, it would produce the ulcerative effects in as great a degree, as when it had not undergone a change, and sometimes in a far greater degree; but, having lost its specific properties, it was incapable of producing that change in the human body, which is requisite, to render it unsusceptible of the variolous contagion. Thus it became evident, that a person might milk a cow one day, and, having caught the disease, be forever secure; while another, milking the same cow next day, might feel the influence of the virus in such a way, as to produce a sore, or pustular eruption, and in consequence of this might experience an indisposition of considerable extent; yet, the

* In some parts of America the *true* disease is called *kine-pock*, and the *spurious* cow-pox.

specific quality being lost, the constitution would receive no peculiar impression.* These observations fully explain the source of those errors, which have been committed by many inoculators for the small-pox as well, as for the kine-pock.

Here then two important objects of pursuit offer themselves to our view. The first is to *learn* how to distinguish with accuracy between that pustule, which is the *true* kine-pock, and those which are *spurious*. Secondly, to ascertain the *precise time, or state*, in which to take the matter for the purpose of inoculation.

 See *Dr. Waterhouse's TREATISE*, where this matter is minutely explained.

POSTSCRIPT.

There is a greater portion of new matter here published, than was contemplated when the title page was printed.

* See Jenner's small tract, entitled "Origin of Vaccine Inoculation."

Excellency Governor Gore will shew in what
light he viewed this ³⁷ important practice

APPENDIX.

the Commonwealth

To His Excellency CHRISTOPHER GORE, Governor of Mas-
sachusetts.

Cambridge, August 29, 1809.

Sir,

I INTENDED to have waited upon your Excellency some time past ; but was loath to call off your attention from the important affairs of the State ; and therefore, instead of a personal interview, I have concluded to make a written communication.

It is ten years since I first undertook the arduous task of exterminating from our land that most dreadful of all diseases, the *small-pox*.

In its slow and disputed march, through this part of the Union, many and obstinate have been its obstructions. Sometimes self-interest, or what was mistaken for it, stopped its progress ; but oftener envy lay, like a serpent in the path, to hiss us back.

I conjecture that two thirds of the inhabitants of this Commonwealth are liable to small-pox ; and I believe full half of our militia are susceptible of this cruel contagion. Were circumstances to call fifteen or twenty thousand men into camp, and this disorder to spread among them, the consequence would be too shocking to think on. Yet PROVIDENCE has given us a safe and easy remedy against this malady, were we but wise enough to accept the proffered blessing. The motto, or rather text in the title page of my treatise will more clearly explain my idea of this renewed instance of Divine goodness.

It is several years since I have been convinced that a general vaccination must be conducted, in a great measure, gratuitously, or in other words, put within the reach of all classes. The poor must have it gratis.

When I mentioned my views to the late Governor SULLIVAN, near the close of his life, he seemed warmed into enthusiasm at the idea; and begged me never to lose sight of my object. He conceived that to render the inhabitants of this state invulnerable to small-pox, was no very difficult thing, if rightly begun, and steadily pursued.

In order to suggest what *may* be done in *Massachusetts*, I have thought it not amiss to shew to your Excellency what *has already been done* among us. I have therefore transmitted for your perusal, during the leisure of your journey,* a copy of my history of the *origin* and *progress* of vaccination in *America*, especially in this state, during ten years past. It is comprised in the first seventy four pages. The other part of the treatise is medical.

I can hardly conceive a thing of greater public importance, than the one here hinted at. It is as far above others, as life is above money; and therefore I need no apology in making this communication to the Governor of *Massachusetts*.

The town of *Milton* is now secured from small-pox; and the next trial I shall make will be on the town of *New Bedford*.† What is done in one town may be done in another. And thus may we strike one from off the catalogue of human evils, by rendering every human being, in this Commonwealth at least, unsusceptible of the most dreadful scourge, with which mankind were ever afflicted.

When your Excellency returns, I may make a further communication on this interesting subject. In the mean time, I hope the Governor will have health to enjoy his journey through a country, blessed with peace, plenty, and contentment. I am, &c. &c.

BENJAMIN WATERHOUSE.

In consequence of this letter, and afterwards, of the appli-

* To the eastern parts of the Commonwealth, to review the militia.

† Dr. Waterhouse inoculated upwards of 2500 persons in the town of New Bedford, in August and September, 1809, and as many more at Newport Rhode Island. —

500,

cation of the town of *Milton*, the Governor introduced the subject in his speech to both houses, January 25, 1810, and said, "Of the duties which the representatives of a free people have to perform, none can be more pleasant than that of *preserving the lives and health* of their fellow citizens. Experience in the United States, as well as in Europe, seems to establish the fact, that the *kine-pox* is a safe, mild, and complete preventive to that loathsome disease, the small-pox."

In Europe the *King of England*, the *Emperor of France*, the *Emperor of Germany*, the *King of Prussia*, the *Empress of Russia*, the *King of Sardinia*, and the *King of Spain* have patronized vaccination; so has *President Jefferson* in America; but **GOVERNOR GORE** is the first chief magistrate of any of the United States, who recommended the practice to the state he governs.

"The *Emperor of Germany* gave silver medals to sixty parents in *Alsace*, who consented to have their children vaccinated."

Dr. *Waterhouse* has received a general abstract, in the Persian and English languages, of persons vaccinated at the Presidency of **MADRAS**, and at the subordinate stations subject to the authority of that government, where were vaccinated

Males	101,762	} Total 178,074.
Females	76,312	

Fort George, Sept. 1, 1806.

The Legislature, in consequence of this, took the matter up, but the plan was finally frittered down to nothing - to worse than nothing by contending interests, & narrow views -

DEBATE

IN THE HOUSE OF COMMONS ON THE REPORT
OF THE COMMITTEE ON *Dr. JENNER'S PE-*
TITION, JUNE 2, 1802.

ADMIRAL BERKLEY said "As to the remuneration, which ought to be given in this case to Dr. Jenner, I hardly know how to appreciate it. I have precedents in my hand, which state various rewards that have been given to ingenious men, which I shall read. [Paper read]. This last vote is only half of the sum constantly voted for the discovery of the longitude, which in every point of view I certainly shall rejoice in, and gladly see the reward bestowed upon it, although we circumnavigate the globe very well without it. But great as that discovery is, I really cannot look upon it in any view to be compared with this of Dr. Jenner's, which is unquestionably the greatest discovery for the preservation of the human species ever made. *It is proved*, that in these united kingdoms alone, 45,000 persons die annually of the small-pox. Are the exertions of that man who puts a stop to this mortality not to be rated higher than the discovery of the longitude, by which not a single life is saved? The number saved here is 40,000; but throughout the world what is it? Not a second is struck by the hand of time, but a victim is sacrificed at the altar of that most horrible of all disorders, the small-pox. I will put it in another point of view—suppose it was proposed in this House, to reward any man who saved the life of a fellow-creature with *ten shillings*; I should be laughed at for the smallness of the sum; but small as it is, I should be contented with it; for if the statement of 40,000 deaths be true, and this discovery prevents it, Dr. Jenner would be entitled to 20,000 pounds per annum. I shall therefore move, that a sum not less than 10,000 pounds be grant-

ed ; but when I do this I declare I do not think it sufficient. But although, as an admirer of Dr. Jenner, and perhaps a personal friend, I cannot forget that I am acting for the public. If the House should think it right to adopt any larger sum, I shall hold myself free to vote for it."

Sir HENRY MILDMAY said, " he did not think the sum proposed was by any means adequate. There was ample testimony from every quarter of the benefit arising from the discovery of Dr. Jenner, who, as soon as he made it, did not keep it locked up in his own breast, but liberally imparted it to the world. Dr. Jenner might, if he had kept it a secret, have made 100,000 pounds by it, as well as any smaller sum ; but he had explained the whole to the world in the clearest manner, and given every information upon the subject that was in his power." He concluded by moving to insert the sum of 20,000 pounds instead of 10,000.

Mr. WINDHAM said, " it had been stated, that a number of persons having made discoveries, rendered the secret of those discoveries the object of a bargain beforehand. He could only say that was not the case here ; a part of the merit of the Petitioner was, that he had not followed that line of conduct ; in this case, the discovery had been imparted to the world, and its benefits proved, before a reward was solicited. If the inventor had kept the secret to himself, he was at a loss to say, what would have been the duty of the House to give to buy the secret. The general question in cases where a public reward was asked for an invention was, whether it was a useful and original invention. When his Hon. Friend said he was on the Committee, and talked of rewards impolitically granted, he thought his Hon. Friend was going to state, that there were great doubts as to its efficacy ; but on the contrary, his Hon. Friend had concurred in the general opinion of the utility of this discovery. Thus then the fact was admitted. The next consideration was, the extent of the utility, which was in this case beyond estimation ; it went to the complete eradication of that dreadful disorder, the small-

pox ; as it stopped the propagation of it, and, in fact, did more by stopping the propagation than by saving individuals. The next question was, whether this was an invention that paid itself ; for if so, the inventor could have no claim for a public reward. Here, however, this was not the fact ; and it was here that the practice of this discovery would be confined to the faculty ; but it was not likely, as supposed by his Hon. Friend, to be confined to Dr. Jenner, as it was capable of being applied by every medical man. This was not the case with the Suttons, the inventors of the small-pox inoculation, with whom the secret remained a long time before it became generally known. It might be said there was still another consideration that might be alledged, that the inventor having made the discovery could not conceal it ; but here, though it might have been difficult to conceal it entirely, yet it might have been so far concealed that it could not have been applied by others, and therefore there was a merit in Dr. Jenner in not concealing it. With all these claims, he had no hesitation in saying, that the discovery was one, which was entitled to reward ; and that a reward ought to be given, not only for the sake of this, but to encourage others to turn their minds towards discovery, and to encourage others, when they had made any useful discovery, not to conceal it, but to impart it as speedily as possible to the public. With respect to the sum proposed, he thought it was the least that could be given for such a discovery, and he had not the smallest hesitation in supporting it."

The CHANCELLOR of the EXCHEQUER said, "that whatever sum of money the Committee might vote to Dr. Jenner as a future reward for his merit, there was one thing clear, and that was, that Dr. Jenner had already received the greatest reward that any individual could receive, the approbation of the House of Commons ; an approbation most richly deserved, since it was the result of the greatest, or one of the most important discoveries to human society that was made since the creation of man ; and he doubted whether the

House of Commons would ever be again called on to decide on a point of greater importance or utility than that which was now before the Committee. Two Reports were now upon the table of the House, and they were founded on two Petitions from two individuals, who had each been most laudably and successfully employed in making discoveries for the preservation of human life. One saved human beings from the perils of shipwreck, the other from perils still greater. With regard to the merit of Dr. Jenner, it was needless to say much; there was no difference of opinion in the committee on that subject. That he had made the important discovery for which the reward was asked, that the value of the discovery was without example, and beyond all calculation, were points not to be contested, for they were made out by convincing evidence; and that he had precluded himself from great emoluments by the generosity of his own conduct, was also most manifest. Wishing, as he did, to see such a person rewarded, yet knowing, as he did, that he had also a duty to discharge towards the public in voting away the public money, he must entreat the Committee to pause a little before it adopted the Amendment now proposed. One effect of the discussion would be, to confirm the general use of the practice of this species of inoculation; another effect would be to establish forever, the merit of Dr. Jenner; at the same time it could not be denied, that while both the practice and the fame of its author became as extensive as possible, the vote of 10,000 pounds by Parliament as a remuneration to Dr. Jenner, would have the effect of enlarging the general practice of that learned physician in the way of his profession; so that both the subject itself, and the individual who discovered it, would be still better known to the world at large by this vote. He would ask whether any Member of the Committee doubted that Dr. Jenner's practice as a physician would not be extended by a vote of 10,000 pounds to him by this Committee? Most undoubtedly that practice would be greatly extended by that vote, as well as by this discussion.

If he were called to say what remuneration was to be given to Dr. Jenner, and that he was to be governed in the amount by the value of the discovery, he really did not know the sum, because the value of the discovery was above all calculation ; but that was not the principle on which the Committee professed to proceed, or on which it was practicable to proceed, the advantages being boundless ; whereas the remuneration must of necessity have its limits ; and then the question would be, what, under all circumstances, was a reasonable remuneration to the author of this discovery ? The difference between 10,000 pounds and 20,000 was not the standard, by which the Committee judged of the merit of Dr. Jenner ; but the question upon the sum was one which had a reference to the duty which the Committee had to perform to the public. He admitted, indeed, with the Right Hon. Gentleman opposite to him (Mr Windham), that the House of Commons were not guardians merely of the public purse, but they were guardians also of the interests of the public, and certainly, as such, would do well to encourage inventions for the preservation of the public health, which formed a very material part of the public interest, and by that consideration alone, he should be led to vote the larger sum proposed ; but he confessed that under all circumstances, he did not think himself justified in recommending it to the Committee as a fit thing to vote this large sum. When he recollected that the value of the invention was beyond all calculation, and when he considered the extent of the merit of Dr. Jenner, he confessed it was painful to him to oppose any sum of money however large it might be ; but when he reflected that the Doctor must have other advantages besides this vote, that the practice of the Doctor would necessarily be very much extended, then he thought the lesser sum was that to which the Committee ought to assent. What had been said on the subject of the losses of Dr. Jenner, in the pursuit of this discovery, he conceived to be inaccurate, with reference to the Committee. He believed that losses had been confounded

with expenses; it appeared that the Doctor had been at considerable expenses in this pursuit, but there was no evidence of his having sustained any losses. In a word, if he did not think that Dr. Jenner would gain other great advantages from this vote, beside the vote itself, he should think himself called upon to vote for the larger sum; but being entirely convinced that he would have many other advantages, and to a great extent, he found himself bound to declare his opinion in favour of the lesser sum. In saying this, he was rather pursuing the sense he had of his public duty, than his own feelings; were he to give way to his feelings, he might assent to any sum, but that was not the course to be followed by men in the discharge of their public duty. He had, however, the satisfaction to reflect, that this discussion had given to Dr. Jenner a reward that would last forever, and also that the comfort of his family would be amply provided for in his extended practice, by means of the sanction of that House."

Mr. GREY said, "that from the tenour of the Right Hon. Gentleman's speech, from his owning that this discovery conferred so many benefits on mankind, he hoped he would have concluded by concurring with the amendment. The importance of the discovery no one could doubt; some difficulty might indeed be made with regard to the extent of the remuneration. We should not in this be too much guided by a view to the expenses incurred, lest we should run the risk of rather giving an indemnification than a reward. He had heard no good reason given for limiting the sum to 10,000 pounds. He conceived there was no fear of its becoming a dangerous precedent, as such discoveries were not made every day. The Right Hon. Gentleman had said, that Dr. Jenner would find a reward in his own conscious benevolence. This, indeed, might afford much gratification to him; but it ill became this House to diminish their reward, because his merit was of such a nature as to yield gratification to benevolent feelings. As to the vote of the House in-

creasing his practice, he saw no reason to expect such a consequence, when every thing attending the vaccine inoculation had been rendered so easy by Dr. Jenner's generous communications. All these circumstances considered, he hoped the House would vote for 20,000 pounds, or at least 15,000."

ADMIRAL BERKELEY said, "that he had fixed upon the sum of 10,000 pounds, not from any idea of its being adequate; and therefore as a larger sum had been moved for, he should consider himself as quite at liberty to vote for it."

Mr. WILBERFORCE stated, that "Dr. Jenner had been engaged in completing this discovery upwards of twenty years; that to the prosecution of it he had devoted that time and those talents which he might have turned to greater emolument by general practice. He was not to be considered as an adventurer who might hope by this discovery to push himself into practice. He had attained celebrity in his profession, and an extensive practice, which he had sacrificed to completing this discovery. There was not a likelihood of his regaining what in this way he had lost, as many others had from his communications acquired such a complete knowledge of the vaccine inoculation as to be employed with equal confidence. Nor was it likely that he would acquire a general practice, as many would be led to suppose that by his exclusive attention to vaccine inoculation he had become less skilful in other parts of medicine. In every view he thought the larger sum ought to be voted."

"Mr. COURTENAY said, "it appeared 40,000 men were annually preserved to the state by Dr. Jenner's discovery; now in former times every individual was reckoned worth forty shillings a year to the revenue; if therefore we suppose the value of human beings to keep pace with other articles, we must now suppose the value of each to be at least 5 pounds a year. By this computation Dr. Jenner has brought into the Exchequer 200,000 pounds annually, and it was hard if out of that sum we did not allow him 20,000 pounds."

The question was then put, that the words "Ten thousand Pounds" do stand part of the resolution; when the Committee divided, *Ayes* 59—*Noes* 56—*Majority* 3.

Two or three years after this, the Parliament of England voted Dr. Jenner the additional reward of *twenty thousand pounds sterling*, making in the whole *one hundred and thirty three thousand, three hundred and thirty three dollars*.

From the New-England Palladium, Feb. 6, 1810.

DR. JENNER.

WHEN the Parliament of England voted Dr. JENNER *thirty thousand pounds sterling*, they did not give it to him, as is commonly supposed, for being the first who took vaccine matter from the cow, and therewith inoculating a human being; for that had been done by various people, men and women, at different times, before JENNER was born; but they gave him that reward for inoculating from *one human being to another*; and for making no mystery of the thing, but for publishing it readily and clearly to the public; for it was given into Parliament by the first physicians in London, as their opinion, that had Dr. JENNER chosen to keep the process secret, *he might have become one of the richest men in the Kingdom*. Dr. WATERHOUSE, having pursued the same line of conduct in *America*, induced the reviewers and the literati in *England*, in *France*, and in *Germany*, to bestow upon him the honorable title of "the JENNER of *America*."—We learn that this fact has been amply proved to the Committee on Dr. *Waterhouse's* memorial to our Legislature, to whom a voluminous body of facts has been submitted. Dr. *Waterhouse* says in his memorial to the Legislature—"Your memorialist kept nothing secret. He held nothing back from the public; not even his own mistakes, when he conceived a knowledge of them would be beneficial to the public."

*Extract of a letter from Dr. JENNER to Dr. WATERHOUSE,
dated Nov. 16, 1807.*

“ My dear sir,

I KNOW not when I have received a letter from you, which afforded me so much satisfaction as yours of the twenty fourth of September; as it intimated to me a design of your friends, to apply to your Government, to requite your vaccine labors with a remuneration. Most ardently do I hope that the application may be successful, and to such an extent as may much enlarge the sphere of your happiness. I feel confident that the opposition you have encountered, the difficulties you have surmounted, and the sacrifices you have made, in preserving your fellow countrymen from the most baneful of disorders, cannot fail to strike your Legislature as entitling you to no ordinary notice. Allow me to add, that the granting favors to the man, whom I have the satisfaction to rank among the earliest, the most active, and the most successful of my transmarine disciples, I shall ever feel as an honor conferred upon myself. Write again soon, as I shall most anxiously wait the arrival of another letter, and be most sadly disappointed, if it does not convey to me intelligence of a very pleasing nature.

“ The British Parliament, as you have seen by the papers, have at length acted liberally towards me. This act of theirs, founded in a great measure on the report presented to them by the Royal College of Physicians on the subject of vaccination, has put to shame those misguided persons, who so long malevolently abused the practice, in a succession of the most wicked pamphlets that ever issued from the press.

“ Within these last six months I have sent you many papers relative to Vaccination, through various channels to America. Perhaps they may not have reached you, and therefore I shall now make another packet. Our friend, Dr. Lettsom, is very well, and so is Mr. Ring. You will see by these papers that Vaccination flourishes the world over, but, I think, more particularly in India than any where else. In China, where one would scarcely have supposed it, it is going on rapidly. I

have had a Pamphlet on this subject in the Chinese language, sent me from India. This little book I shall put up for you, I dare say will point out many things, which never met your eye before."

WHILE Dr. JENNER is known and respected, throughout this country, as a philosopher and physician, he is little known as a *man*. The following letter is therefore selected, from among a number of others, as expressive of his private character. In this free, frank, friendly, and rapidly written epistle, we discern that sensibility and warmth of heart, which universally accompanies men eminent for philanthropy.

From Dr. JENNER to Dr. WATERHOUSE.

London, Bond-Street, Feb. 24, 1801.

My dear Sir,

I BELIEVE, according to the laws of true politeness, I should begin this letter with an apology. Allow me then to request you to pardon my seeming inattention. I say *seeming*, for be assured you are frequently in my thoughts; and when I think of you, I foolishly long for powers that a mortal ought not to aspire at. Nothing less than a trumpet, not that *whispering* thing used by the mariner, but one that would carry my voice on the rapid wings of the wind across the wide ocean that divides us. How quickly would I then soothe a thousand unpleasant feelings! How quickly would I then silence the malevolent tongue of an that seems to wish to disturb your repose for being an advocate in the cause of human happiness. It is impossible for me, who bear in mind the philanthropic intrepidity of your conduct in adopting vaccine inoculation, in a part of the world so remote from all aid, in case of embarrassment, to think of you, without feeling indignant at the unjust dealings of this insidious person. But I shall suspend my resentment, hoping that when you favor me with another letter it may inform me of this

Gentleman's conversion and the recantation of his errors. Every champion in the cause of vaccination has had his to contend with.—As for myself, I have had an Host of them upon me ; but, thank Heaven, they are all subdued, or nearly so, and vaccination is marching triumphantly through the globe. After this, an attempt to enumerate to you the countries which have adopted it, would be superfluous.

I feel much indebted to the French nation for the early and liberal manner in which they took it up ; and for their ingenuity and benevolence in rapidly disseminating a perfect knowledge of the disease. To the Germans also I stand indebted greatly. Dr. De Carro of Vienna, I believe was the first who introduced it on the European continent. What I owe to the AMERICANS, on this occasion, must not be mentioned here.

What a lamentable thing is distance ? distance almost immeasurable between friend and friend !—Would I could say, will you dine with me ? or take your coffee with me tomorrow, that we may talk over fully our vaccine affairs ? But alas ! so great is the space between us, you might as well receive my invitation in the moon, nay the georgium sidus, as on the other side the Atlantic. We must do the best we can under these disadvantages, and be thankful that the ingenuity of man has devised ships, and given speech to *feathers*.

On the vaccine subject I fear I shall have little new to offer you. Knowing that you are in possession of the writings of Mr. Ring upon the vaccine inoculation, I shall find it difficult to give you any thing worthy of observation ; for no occurrence connected with it escapes his vigilant, and I may add, his accurate eye. His work will contain a fund of information, both for present times, and those which are to come.

Conceiving it probable, from circumstances which have lately transpired, that the truth of my assertions may be investigated by Parliament, and that I may obtain a reim-

bursement of my pecuniary expenses attendant on the research, (those of my *constitution*, arising from the peculiar fatigue of anxiety, I never shall regain), I have lately requested some of those medical gentlemen, who I knew had been most active in the cause, to lay before me the result of their practice. You would be charmed to see what a volume of evidence this has produced. Not only cases more than I can number, but the attendant facts are so cheering, that I must give you one as a specimen. A worthy clergyman, the Rev. Mr. *Finch* of St. Helens in Lancashire, writes as follows: "A few years ago I was in the habit of burying, in the spring and autumnal seasons, two or three children almost every evening with the small-pox; but now this disease has ceased entirely to call a single victim to the grave. Why? I have vaccinated upwards of three thousand persons in my neighbourhood, and the small-pox no longer exists among us." What a glorious fact! How every heart, possessing even an atom of philanthropy, must exult at this!

The most arduous task that I have lately had to execute has been that of keeping practitioners in order; making them sensible of the absolute necessity of attending to the *quality* of the virus employed. You will receive with this some rules, compressed in a small space. I have sent you also some virus from a new stock, the history of which you shall hear. The old stock, now in use, nearly three years, has not lost any of its original properties, nor do I suppose it ever will. A medical gentleman at Milan, Dr. *Sacco*, who informed me he has inoculated 8000 persons in that city, has lately sent me vaccine virus, taken from a dairy on the plains of Lombardy. It has produced again and again the perfect pustule here. I always ventured to predict, that the cow-pox was not confined to this island only, but wherever in the same dairy there should happen to be the peculiar intercourse I have pointed out, between the horse (for we must be compelled to own its humble origin), the man, the cow, and its milker, that there

the disease may be called into existence. Abundant testimonies of the source of the vaccine virus have lately appeared, and I have long been convinced, that it is as perfect in all its extraordinary qualities in its *equine*, as in its *vaccine* state ; perfect in its first formation, and imperfect when secreted at a late period of the disease ; just as it is when transferred and subjected to go through its progressive stages in the human body.

My correspondence has been so incessant, that even the few sheets intended to accompany the plates, (a few copies of which you have received from me), are not yet ready, or I should take particular pleasure in conveying them to you. I have thought it proper to have a coloured plate of the *spurious* pustule, in that insidious shape, under which perhaps, with all our precautions, it will sometimes obtrude itself. This comes nearest to the real ; and I should not be surprised when you say, that it is a copy of that pustule, which for a while perplexed you, and suspended your reputation. In two or three instances, when I have inoculated a vast number of persons in the same hour, I have seen *this* pustule upon one arm, and the perfect pustule upon the other. Observe, the drawing was made upon the sixth day of its advancement ; on the eighth the progress of scabbing had advanced considerably. It is only the young beginner, who can be deceived by this *impostor*. I have thought it was produced in the cases alluded to, from the want of the precaution of cleaning the point of the lancet between each inoculation ; as the instrument must necessarily become loaded with a mixture of fluids in passing several times from arm to arm.

And now, my good Doctor, I would fain proceed further, and *settle my epistolary account* with you ; but our friend *Spalding* tells me if I do not make haste, the ship, intended to convey this, will be gone. Spare then *my life** a little longer. —I have not said half I wish to say, nor taken that notice of

* Some particulars of his life, for a biographical sketch ; which has since been published in England and America.

your excellent epistles so fully as I ought. But I am this moment fifty letters behind hand with my correspondents—a distressing idea.—Think what a weight has fallen upon me, and be compassionate when you peruse this blotted scrawl ; and think too how highly you are esteemed by

your faithful friend and servant,

EDWARD JENNER.

To S..... C..... Esq. *Boston.*

Dear Sir,

THE question that has been asked is not, in my opinion, an improper one, at this time.*

I agree with you that an exact statement of things ought to be expressed, in the most unreserved manner. The list of all I have ever inoculated, with the fees I have received is open to the examination of any person who shall ask it of me. I do not suppose that I am poorer for my labors in vaccination ; but I am certain that I am not richer. This you will believe when I declare, that should I be taken out of life tomorrow, I should not leave enough behind me to complete the education of my children ; those children who were the first subjects of vaccine and *variolous* experiments in America.

Should you wish for a more particular detail, I will readily communicate it personally ; which will entirely do away the opinion, that I have made an handsome property by the kine-pock inoculation. I am &c.

BENJAMIN WATERHOUSE.

Cambridge, 7 Feb. 1810.

P. S. You can inquire of the members from *New Bedford* and *Canton* what I made by my late vaccination of their respective towns, and judge by that how people have been mistaken.

* A petition had just been presented to the Legislature of Massachusetts by Dr. Waterhouse, respecting remuneration.

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